



# S DEPARTMENT OF COMMERCE **Patent and Trademark Offic**

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FILING DATE	FIRST NAMED INVENTOR			ATTORNEY DOCKET NO.
05/11/99	BURROWS		L	CALT-2806
	IM2271122	一	EXAMINER	
CARY & KELLY, LLP			CHAMPAGNE, D	
STON RD.			ART UNIT	PAPER NUMBER
MOUNTAIN VIEW, CA 94043		. •	1765	\2
			DATE MAILED:	11/22/00
	05/11/99 /, LLP STON RD.	05/11/99 BURROWS IM22/1122 /, LLP STON RD.	05/11/99 BURROWS  IM22/1122  /, LLP STON RD.	O5/11/99 BURROWS L  IM22/1122  CHAMPA STON RD.  EW, CA 94043

Please find below and/or attached an Office communication concerning this application or proceeding.

**Commissioner of Patents and Trademarks** 

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	Application No.	Applicant(s)				
Office Action Summary	09/309,361	BURROWS, LEE J.				
omoc Motion Gammary	Examiner	Art Unit				
	Donald L. Champagne	1765				
Th MAILING DATE of this communication appeared for Reply	ears on the cover sheet with the co	rrespondence address				
A SHORTENED STATUTORY PERIOD FOR REPL' THE MAILING DATE OF THIS COMMUNICATION.  - Extensions of time may be available under the provisions of 37 CFR 1.1 after SIX (6) MONTHS from the mailing date of this communication.  - If the period for reply specified above is less than thirty (30) days, a repl - If NO period for reply is specified above, the maximum statutory period of Failure to reply within the set or extended period for reply will, by statute - Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b).  Status	36 (a). In no event, however, may a reply be time y within the statutory minimum of thirty (30) days will apply and will expire SIX (6) MONTHS from the cause the application to become ABANDONED	nely filed s will be considered timely. the mailing date of this communication. O (35 U.S.C. § 133).				
1) Responsive to communication(s) filed on <u>02</u>	October 2000 .					
2a)  This action is FINAL. 2b)  Th	is action is non-final.					
3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213.						
Disposition of Claims						
4)⊠ Claim(s) <u>1-26</u> is/are pending in the application.						
4a) Of the above claim(s) 19-21 and 26 is/are withdrawn from consideration.						
5) Claim(s) is/are allowed.						
6)⊠ Claim(s) <u>1-18 and 22-25</u> is/are rejected.						
7) Claim(s) is/are objected to.						
8) Claims are subject to restriction and/o	r election requirement.					
Application Papers						
9) The specification is objected to by the Examin	er.					
10) The drawing(s) filed on is/are objected	to by the Examiner.					
11) The proposed drawing correction filed on is: a) approved b) disapproved.						
12) The oath or declaration is objected to by the Examiner.						
Priority under 35 U.S.C. § 119						
13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).						
a) ☐ All b) ☐ Some * c) ☐ None of:						
1. Certified copies of the priority documents have been received.						
2. Certified copies of the priority documents have been received in Application No						
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).						
* See the attached detailed Office action for a list of the certified copies not received.						
14) Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).						
Attachment(s)						
15) Notice of References Cited (PTO-892) / 18) Interview Summary (PTO-413) Paper No(s)						
<ul> <li>16) Notice of Preferences Cited (PTO-092)</li> <li>16) Notice of Draftsperson's Patent Drawing Review (PTO-948)</li> <li>17) Information Disclosure Statement(s) (PTO-1449) Paper No(s)</li> </ul>	19) Notice of Informal	Patent Application (PTO-152)				

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### **DETAILED ACTION**

### Election/Restriction

- Applicant's election of claims 1-18 and 22-25 in Paper No. 10 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
- 2. Hence, the requirement is still deemed proper and is therefore made FINAL. Claims 19-21 and 26 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

## Claim Rejections - 35 U.S.C. § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. <u>Claims 23-25</u> are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. At claim 23 line 1, "niolate" is indefinite.

### Claim Rejections - 35 U.S.C. § 103

- 5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
  - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 6. <u>Claims 1-13, 17, 18 and 22-25</u> are rejected under 35 U.S.C. 103(a) as obvious over Holman (US pat. 4,640,736).
  - <u>Holman teaches</u> a method for annealing an optical waveguide comprising a lithium niobate or lithium tantalate structure (crystal), comprising heating the structure in a sealed oxygen gas atmosphere at a pressure exceeding ambient atmospheric pressure, maintaining pressure

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and temperature for an annealing period, and cooling to room temperature (col. 2 lines 3-34 and col. 6 lines 49-51).

Holman does not teach annealing temperature of 150-1000 C or the heating and cooling rates, and pressures of the claims. Temperature, pressure and heating/cooling rates are parameters commonly determined by routine experiment. The process of conducting routine optimization experiments so as to produce an expected result is obvious to one of ordinary

skill in the art. Hence, it would have been obvious to one of ordinary skill in the art, at the

time of the invention, to conduct routine experiments so as to determine optimum annealing

temperature, pressure and heating/cooling rates as expected results.

7. Claims 14-16 are rejected under 35 U.S.C. 103(a) as obvious over Holman in view of

Japanese patent document JP 04249215 A.

Holman does not teach annealing an optical modulator, including after buffer layer deposit and electrode fabrication. Japanese patent document JP 04249215 A teaches annealing an optical modulator, including after buffer layer deposit and electrode fabrication (Derwent English abstract). Because Japanese patent document JP 04249215 A teaches that heat treating after addition of the electrode (and implicitly after buffer layer deposit since the buffer layer must be deposited before the electrode is formed) raises the damage resistance of the waveguide, it would have been obvious to one of ordinary skill in the art, at the time of the

result.

Conclusion

invention, to annealing the crystal after formation of the optical modulator as an expected

8. The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure. Stoll (col. 4 lines 20-48) teaches some aspects of the instant invention.

9. Any inquiry concerning this communication or earlier communications from the examiner

should be directed to Donald L. Champagne whose telephone number is (703)308-3331.

DLC

19 November 2000

BENJAMIN L. UTECH SUPERVISORY PATENT EXAMINER

Muda

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